

Practitioner's Docket No. 1392/10/19 PCT/US
U.S. Serial No. 10/533,232

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|------------|
| CHAPTER II |
|------------|

IN THE UNITED STATES ELECTED OFFICE (EO/US)

| | | |
|-------------------------------|-----------------------------|-----------------------------|
| PCT/US03/41200 | 23 December 2003 (23.12.03) | 26 December 2002 (26.12.02) |
| International Application No. | International Filing Date | Priority Date Claimed |

CELL PROLIFERATION-RELATED POLYPEPTIDES AND USES THEREFOR

Title of Invention

Syngenta Participations AG; Cooper, Bret
Applicant(s)

Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
ATTENTION: EO/US

COMPLETION OF FILING REQUIREMENTS
FOR INTERNATIONAL APPLICATION ENTERING U.S. NATIONAL STAGE
IN U.S. ELECTED OFFICE (EO/US) UNDER 35 U.S.C. § 371

This replies to the Notice of Missing Requirements under 35 U.S.C. § 371 and 37 C.F.R. § 1.495 (FORM PCT/DO/EO/905).

A copy of FORM PCT/DO/EO/905 accompanies this response.

EXPRESS MAILING UNDER 37 C.F.R. § 1.10*

(Express Mail label number is *mandatory*.)

(Express Mail certification is *optional*.)

I hereby certify that this paper, along with any document referred to, is being deposited with the United States Postal Service on this date November 22, 2005 in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 as "Express Mail Post Office to Addressee" Mailing Label No. EV579134359US.

Stacie H. Boswell

Date: November 22, 2005

Stacie H. Boswell
Signature of person certifying

WARNING: Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

***WARNING:** Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. 1.10(b).

"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will **not** be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

DECLARATION OR OATH

- I. The declaration or oath that was filed was determined to be defective. A new original oath or declaration is attached.

SEQUENCE LISTING

- II. The computer readable form of the Sequence Listing that was filed with the subject application has been found not to comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821-1.825. A substitute computer readable form, a Substitute Sequence Listing on CD-R (in triplicate), a Statement Regarding Identity of Copies of Sequence Listing, and a Preliminary Amendment directing entry of the Substitute Sequence Listing into the application are enclosed herewith.

III. FEES

1. Surcharge fees
Surcharge for filing the oath or declaration
later than thirty months from the priority
date pursuant to § 1.495(c): \$130.00
Total Fees \$130.00

EXTENSION OF TIME

- IV. The proceedings herein are for a patent application. Accordingly, the provisions of 37 C.F.R. § 1.136(a) apply.

Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

TOTAL FEE DUE

- V. The total fee due is:
Completion fee(s) \$130.00
TOTAL FEE DUE \$130.00


PAYMENT OF FEES

- VI. Authorization is hereby made to charge the amount of \$130.00 to Deposit Account No. 50-0426. Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.
A duplicate of this request is attached.

Date: 11/22/2005

Reg. No.: 39,395
Tel. No.: 001-919-493-8000
Customer No.: 25297

11/29/2005 ATRANI 00000110 500426 10533232
01 FC:1617 130.00 DA



Signature of Practitioner
Arles A. Taylor, Jr.
Jenkins, Wilson & Taylor, P.A.
Suite 1400 University Tower
3100 Tower Boulevard
Durham, NC 27707
UNITED STATES OF AMERICA



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| U.S. APPLICATION NUMBER NO. | FIRST NAMED APPLICANT | ATTY. DOCKET NO. |
|-----------------------------|-----------------------|-------------------|
| 10/533,232 | Bret Cooper | 1392/10/19 PCT/US |

25297
JENKINS, WILSON & TAYLOR, P. A.
3100 TOWER BLVD
SUITE 1400
DURHAM, NC 27707

INTERNATIONAL APPLICATION NO.

PCT/US03/41200

I.A. FILING DATE

12/23/2003

PRIORITY DATE

12/26/2002

CONFIRMATION NO. 2354

371 FORMALITIES LETTER



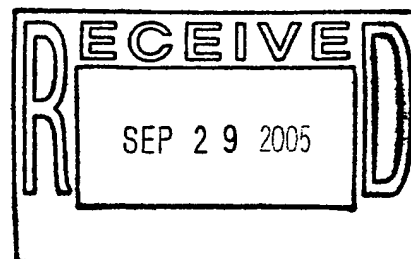
OC000000017076491

Date Mailed: 09/23/2005

NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Copy of the International Application filed on 04/29/2005
- Biochemical Sequence Diskette filed on 04/29/2005
- Oath or Declaration filed on 04/29/2005
- U.S. Basic National Fees filed on 04/29/2005
- Priority Documents filed on 04/29/2005
- Specification filed on 04/29/2005
- Claims filed on 04/29/2005
- Abstracts filed on 04/29/2005
- Drawings filed on 04/29/2005



The applicant needs to satisfy supplemental fees problems indicated below.

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date. The current oath or declaration does not comply with 37 CFR 1.497(a) and (b) in that it:
 - is not executed in accordance with either 37 CFR 1.66 or 37 CFR 1.68.
- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.492(h) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

DOCKET DATES: 2/23/03, 3/23/04, 10/23/11
ASSIGNED ATTY: AAT/CPP
FILE NO. 1392/10/19 PCT/US
DOCKETED BY: JMD
DATE: 10-19-05

Total additional fees required for this application is \$130 for a Large Entity:

- **\$130 Surcharge.**
- This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 CFR 1.821(c) Applicant must provide an initial paper or compact disc copy of the "Sequence Listing", **as well as an amendment specifically directing its entry into the application** and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d). If the effective filing date is on or after September 8, 2000, see the final rulemaking notice published in the Federal Register at 65 FR 54604 (September 8, 2000) and 1238 OG 145 (September 19, 2000).
- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- **For Rules Interpretation, call (571) 272-0951**
- **For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.**
- **Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov**

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

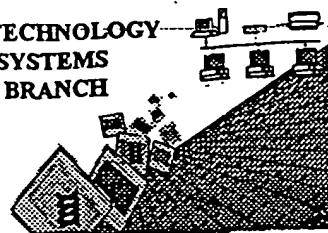
*A copy of this notice **MUST** be returned with the response.*

BARBARA A CAMPBELL

Telephone: (703) 308-9140 EXT 217

PART 1 - ATTORNEY/APPLICANT COPY

| U.S. APPLICATION NUMBER NO. | INTERNATIONAL APPLICATION NO. | ATTY. DOCKET NO. |
|-----------------------------|-------------------------------|-------------------|
| 10/533,232 | PCT/US03/41200 | 1392/10/19 PCT/US |



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:

10/533232

Source:

PG

Date Processed by STIC:

5/12/15

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER
VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Garry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):
U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby,
Room 1B03, Arlington, VA 22202

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER:

10533232

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 **Wrapped Nucleics**
Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .J; this will prevent "wrapping."
- 2 **Invalid Line Length** The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 **Misaligned Amino Numbering** The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 **Non-ASCII** The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 **Variable Length** Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 **PatentIn 2.0 "bug"** A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 **Skipped Sequences (OLD RULES)** Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO X (insert SEQ ID NO where "X" is shown)
(i) SEQUENCE CHARACTERISTICS (Do not insert any subheadings under this heading!)
(ii) SEQUENCE DESCRIPTION SEQ ID NO X (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(iii) NUMBER OF SEQUENCES" response to include the skipped sequences.
- 8 **Skipped Sequences (NEW RULES)** Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
<210> sequence id number
<400> sequence id number
000
- 9 **Use of n's or Xaa's (NEW RULES)** Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 **Invalid <213> Response** Per 1.823 of Sequence Rules, the only valid <213> responses are Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or Artificial Sequence.
- 11 **Use of <220>** Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 00701/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 **PatentIn 2.0 "bug"** Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 **Misuse of n/Xaa** "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid.



PCT

RAW SEQUENCE LISTING

DATE: 05/12/2005

PATENT APPLICATION: US/10/533,232

TIME: 08:24:04

Input Set : D:\1392-10-19 PCT.ST25.txt

Output Set: N:\CRF4\05122005\J533232.raw

3 <110> APPLICANT: Cooper, Bret
 5 <120> TITLE OF INVENTION: CELL PROLIFERATION-RELATED POLYPEPTIDES AND USES THEREFOR
 7 <130> FILE REFERENCE: 1392-10-19-2
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/533,232
 C--> 9 <141> CURRENT FILING DATE: 2005-04-29
 9 <150> PRIOR APPLICATION NUMBER: US 60/436,565
 10 <151> PRIOR FILING DATE: 2002-12-26
 12 <160> NUMBER OF SEQ ID NOS: 349
 14 <170> SOFTWARE: PatentIn version 3.2
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 885
 18 <212> TYPE: DNA
 19 <213> ORGANISM: Oryza sativa
 22 <220> FEATURE:
 23 <221> NAME/KEY: CDS
 24 <222> LOCATION: (1)..(885)
 26 <400> SEQUENCE: 1
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 29 1 5 10 15
 31 ggc ctg gcc aac ctg ctc att cgc gaa ggc gcc ggc ctc cct tcg cgt 96
 32 Gly Leu Ala Asn Leu Leu Ile Arg Glu Gly Ala Gly Leu Pro Ser Arg
 33 20 25 30
 35 ccc gaa cgg tac ccg cca ttc cgg ccc tgt act tct gat tcc ttt gct 144
 36 Pro Glu Arg Tyr Pro Pro Phe Arg Pro Cys Thr Ser Asp Ser Phe Ala
 37 35 40 45
 39 cca atc tct agg gaa ggg gac gat att ccc ccc caa aaa aaa tcg gtt 192
 40 Pro Ile Ser Arg Glu Gly Asp Asp Ile Pro Pro Gln Lys Lys Ser Val
 41 50 55 60
 43 tct tta cgc agc ggc ggc ggc ggc aat gcg gca gag agg gag gag ggc 240
 44 Ser Leu Arg Ser Gly Gly Gly Gly Asn Ala Ala Glu Arg Glu Glu Gly
 45 65 70 75 80
 47 ggt gcg aac agg aac ggg aag aag gag aag acc ggg gcg cag agg atc 288
 48 Gly Ala Asn Arg Asn Gly Lys Lys Glu Lys Thr Gly Ala Gln Arg Ile
 49 85 90 95
 51 acc ggg tgg ggg ctc cgt gag ttc agc aag ata gtt tct aag aaa gtt 336
 52 Thr Gly Trp Gly Leu Arg Glu Phe Ser Lys Ile Val Ser Lys Lys Val
 53 100 105 110
 55 gag gcc aaa gga aga acc aca tat aat gag gtt gcc gat gag att ttt 384
 56 Glu Ala Lys Gly Arg Thr Thr Tyr Asn Glu Val Ala Asp Glu Ile Phe
 57 115 120 125
 59 gcg gag ctg aag tcc att acg cag aac ggt ctg gag ttt gat gag aag 432
 60 Ala Glu Leu Lys Ser Ile Thr Gln Asn Gly Leu Glu Phe Asp Glu Lys

Does Not Comply
Corrected Diskette Needed

P.6

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/533,232

DATE: 05/12/2005

TIME: 08:24:04

Input Set : D:\1392-10-19 PCT.ST25.txt

Output Set: N:\CRF4\05122005\J533232.raw

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61      130      135      140
63 aat att agg cgg agg gta tat gat gct ttc aat gtg ctc att gca att      480
64 Asn Ile Arg Arg Arg Val Tyr Asp Ala Phe Asn Val Leu Ile Ala Ile
65 145      150      155      160
67 cgt gtt att gca aaa gat aaa aag gag ata aag tgg atg ggc ctt act      528
68 Arg Val Ile Ala Lys Asp Lys Lys Glu Ile Lys Trp Met Gly Leu Thr
69      165      170      175
71 aat tat aga tac gaa aag ata cag aag ttg gag gaa gtt cac aaa gaa      576
72 Asn Tyr Arg Tyr Glu Lys Ile Gln Lys Leu Glu Glu Val His Lys Glu
73      180      185      190
75 ctc atc acc agg atc aag aat aag aag aag ctt ctc cag gaa att gaa      624
76 Leu Ile Thr Arg Ile Lys Asn Lys Lys Lys Leu Leu Gln Glu Ile Glu
77      195      200      205
79 aag cag ttt gat gac ctt cag aat att aca tta cgc aac cag gct agt      672
80 Lys Gln Phe Asp Asp Leu Gln Asn Ile Thr Leu Arg Asn Gln Ala Ser
81      210      215      220
83 cag agg cca gca gaa agt gtt aat ggc atc ctc ctt ccg ttc tta ttg      720
84 Gln Arg Pro Ala Glu Ser Val Asn Gly Ile Leu Leu Pro Phe Leu Leu
85 225      230      235      240
87 atc aag aca tcc cga aaa gca agg gtg gaa att gag att tcg gaa gat      768
88 Ile Lys Thr Ser Arg Lys Ala Arg Val Glu Ile Glu Ile Ser Glu Asp
89      245      250      255
91 tcg aag ttt gca cgg ttc gac ttc aac ggt gca cca ttc acc atg cat      816
92 Ser Lys Phe Ala Arg Phe Asp Phe Asn Gly Ala Pro Phe Thr Met His
93      260      265      270
95 gat gat gta tca atc ctt gaa gcc atc agg cgt aac aaa gga aga gct      864
96 Asp Asp Val Ser Ile Leu Glu Ala Ile Arg Arg Asn Lys Gly Arg Ala
97      275      280      285
99 ggc ctc tcc att cac cct taa      885
100 Gly Leu Ser Ile His Pro
101      290
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105 <211> LENGTH: 294
106 <212> TYPE: PRT
107 <213> ORGANISM: Oryza sativa
109 <400> SEQUENCE: 2
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112 1      5      10      15
115 Gly Leu Ala Asn Leu Leu Ile Arg Glu Gly Ala Gly Leu Pro Ser Arg
116      20      25      30
119 Pro Glu Arg Tyr Pro Pro Phe Arg Pro Cys Thr Ser Asp Ser Phe Ala
120      35      40      45
123 Pro Ile Ser Arg Glu Gly Asp Asp Ile Pro Pro Gln Lys Lys Ser Val
124      50      55      60
127 Ser Leu Arg Ser Gly Gly Gly Gly Asn Ala Ala Glu Arg Glu Glu Gly
128 65      70      75      80
131 Gly Ala Asn Arg Asn Gly Lys Lys Glu Lys Thr Gly Ala Gln Arg Ile
132      85      90      95
135 Thr Gly Trp Gly Leu Arg Glu Phe Ser Lys Ile Val Ser Lys Lys Val

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RAW SEQUENCE LISTING

DATE: 05/12/2005

PATENT APPLICATION: US/10/533,232

TIME: 08:24:04

Input Set : D:\1392-10-19 PCT.ST25.txt

Output Set: N:\CRF4\05122005\J533232.raw

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136          100          105          110
139 Glu Ala Lys Gly Arg Thr Thr Tyr Asn Glu Val Ala Asp Glu Ile Phe
140          115          120          125
143 Ala Glu Leu Lys Ser Ile Thr Gln Asn Gly Leu Glu Phe Asp Glu Lys
144          130          135          140
147 Asn Ile Arg Arg Arg Val Tyr Asp Ala Phe Asn Val Leu Ile Ala Ile
148 145          150          155          160
151 Arg Val Ile Ala Lys Asp Lys Lys Glu Ile Lys Trp Met Gly Leu Thr
152          165          170          175
155 Asn Tyr Arg Tyr Glu Lys Ile Gln Lys Leu Glu Glu Val His Lys Glu
156          180          185          190
159 Leu Ile Thr Arg Ile Lys Asn Lys Lys Lys Leu Leu Gln Glu Ile Glu
160          195          200          205
163 Lys Gln Phe Asp Asp Leu Gln Asn Ile Thr Leu Arg Asn Gln Ala Ser
164          210          215          220
167 Gln Arg Pro Ala Glu Ser Val Asn Gly Ile Leu Leu Pro Phe Leu Leu
168 225          230          235          240
171 Ile Lys Thr Ser Arg Lys Ala Arg Val Glu Ile Glu Ile Ser Glu Asp
172          245          250          255
175 Ser Lys Phe Ala Arg Phe Asp Phe Asn Gly Ala Pro Phe Thr Met His
176          260          265          270
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180          275          280          285
183 Gly Leu Ser Ile His Pro
184          290
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188 <211> LENGTH: 1041
189 <212> TYPE: DNA
190 <213> ORGANISM: Oryza sativa
193 <220> FEATURE:
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195 <222> LOCATION: (1)..(1041)
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199 Met Val Ser Gly Ala Ala His Ser Ala Ser Thr Ser Gly Gly Gly Gly
200 1          5          10          15
202 ggg agc gag ggc tcc ccc acc ggc cgc gcc gcg ccg ggc atg cag ggc      96
203 Gly Ser Glu Gly Ser Pro Thr Gly Arg Ala Ala Pro Gly Met Gln Gly
204          20          25          30
206 ggc ggc agc gcc gcc acg ccc gcc gcc tcg gcc tcc gcg tcc acg ccg      144
207 Gly Gly Ser Ala Ala Thr Pro Ala Ala Ser Ala Ser Ala Ser Thr Pro
208          35          40          45
210 gcc agc gag acc acc gtc gcc cgc cgc ctc gac ggc ctc gac atc cag      192
211 Ala Ser Glu Thr Thr Val Ala Arg Arg Leu Asp Gly Leu Asp Ile Gln
212          50          55          60
214 ggc gac gac gcg ccc tcg tcg cag ccc gcc acg agc aag aag aaa aaa      240
215 Gly Asp Asp Ala Pro Ser Ser Gln Pro Ala Thr Ser Lys Lys Lys Lys
216 65          70          75          80
218 agg ggg cct gga aca cgt gca acg ggc cct gac aag ggt ggc cgt gga      288

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RAW SEQUENCE LISTING

DATE: 05/12/2005

PATENT APPLICATION: US/10/533,232

TIME: 08:24:04

Input Set : D:\1392-10-19 PCT.ST25.txt

Output Set: N:\CRF4\05122005\J533232.raw

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 219 | Arg | Gly | Pro | Gly | Thr | Arg | Ala | Thr | Gly | Pro | Asp | Lys | Gly | Gly | Arg | Gly | |
| 220 | | | | | 85 | | | | | 90 | | | | | 95 | | |
| 222 | ttg | cgc | caa | ttt | agt | atg | aaa | gtt | tgt | gag | aaa | gtt | gaa | agc | aaa | ggg | 336 |
| 223 | Leu | Arg | Gln | Phe | Ser | Met | Lys | Val | Cys | Glu | Lys | Val | Glu | Ser | Lys | Gly | |
| 224 | | | | 100 | | | | | 105 | | | | | 110 | | | |
| 226 | aga | aca | acc | tac | aac | gag | gtg | gca | gat | gag | ctt | gta | gct | gag | ttt | gca | 384 |
| 227 | Arg | Thr | Thr | Tyr | Asn | Glu | Val | Ala | Asp | Glu | Leu | Val | Ala | Glu | Phe | Ala | |
| 228 | | | 115 | | | | | 120 | | | | | 125 | | | | |
| 230 | gac | ccc | aac | aat | aat | ttt | gca | tca | cct | gat | cct | gac | aac | cct | aac | aca | 432 |
| 231 | Asp | Pro | Asn | Asn | Asn | Phe | Ala | Ser | Pro | Asp | Pro | Asp | Asn | Pro | Asn | Thr | |
| 232 | | 130 | | | | | 135 | | | | | 140 | | | | | |
| 234 | cca | caa | ttt | gat | gag | aaa | aat | ata | cga | cga | agg | gtt | tat | gat | gca | ttg | 480 |
| 235 | Pro | Gln | Phe | Asp | Glu | Lys | Asn | Ile | Arg | Arg | Arg | Val | Tyr | Asp | Ala | Leu | |
| 236 | 145 | | | | | 150 | | | | 155 | | | | | 160 | | |
| 238 | aat | gtc | ctg | atg | gct | atg | gat | att | ata | tct | aag | gat | aaa | aag | gaa | att | 528 |
| 239 | Asn | Val | Leu | Met | Ala | Met | Asp | Ile | Ile | Ser | Lys | Asp | Lys | Lys | Glu | Ile | |
| 240 | | | | 165 | | | | | 170 | | | | | 175 | | | |
| 242 | cag | tgg | aag | ggc | ttg | cct | cgg | aca | agt | atg | agc | gat | gtt | gaa | gaa | ttg | 576 |
| 243 | Gln | Trp | Lys | Gly | Leu | Pro | Arg | Thr | Ser | Met | Ser | Asp | Val | Glu | Glu | Leu | |
| 244 | | | 180 | | | | | 185 | | | | | 190 | | | | |
| 246 | aag | aca | gag | atc | atc | gga | ctg | aaa | ggg | agg | atc | gac | aag | aaa | aat | gca | 624 |
| 247 | Lys | Thr | Glu | Ile | Ile | Gly | Leu | Lys | Gly | Arg | Ile | Asp | Lys | Lys | Asn | Ala | |
| 248 | | | 195 | | | | 200 | | | | | 205 | | | | | |
| 250 | tat | ttg | cag | gag | tta | gaa | gat | caa | ttt | gta | ggg | ctt | caa | aac | ttg | gca | 672 |
| 251 | Tyr | Leu | Gln | Glu | Leu | Glu | Asp | Gln | Phe | Val | Gly | Leu | Gln | Asn | Leu | Ala | |
| 252 | | 210 | | | | | 215 | | | | 220 | | | | | | |
| 254 | cag | cga | aac | gag | cag | ctt | tat | ggg | tca | gga | aat | gct | cct | tca | gga | gga | 720 |
| 255 | Gln | Arg | Asn | Glu | Gln | Leu | Tyr | Gly | Ser | Gly | Asn | Ala | Pro | Ser | Gly | Gly | |
| 256 | 225 | | | | 230 | | | | 235 | | | | | | 240 | | |
| 258 | gtg | gca | ttg | cca | ttt | ata | ttg | gtg | cag | aca | cgt | cct | cat | gct | aca | gta | 768 |
| 259 | Val | Ala | Leu | Pro | Phe | Ile | Leu | Val | Gln | Thr | Arg | Pro | His | Ala | Thr | Val | |
| 260 | | | | 245 | | | | 250 | | | | | | 255 | | | |
| 262 | gaa | gtg | gag | ata | tca | gaa | gat | atg | cag | ctg | gtg | cat | ttt | gat | ttc | aat | 816 |
| 263 | Glu | Val | Glu | Ile | Ser | Glu | Asp | Met | Gln | Leu | Val | His | Phe | Asp | Phe | Asn | |
| 264 | | | 260 | | | | 265 | | | | | | 270 | | | | |
| 266 | agc | act | cca | ttt | gaa | ctg | cat | gac | gat | tcc | ttt | gta | ctg | aaa | gca | ttg | 864 |
| 267 | Ser | Thr | Pro | Phe | Glu | Leu | His | Asp | Asp | Ser | Phe | Val | Leu | Lys | Ala | Leu | |
| 268 | | | 275 | | | | 280 | | | | | 285 | | | | | |
| 270 | ggg | ttc | tct | ggc | aaa | gaa | cca | gat | gat | acg | caa | gcc | tgg | gtt | gga | aat | 912 |
| 271 | Gly | Phe | Ser | Gly | Lys | Glu | Pro | Asp | Asp | Thr | Gln | Ala | Trp | Val | Gly | Asn | |
| 272 | | 290 | | | | | 295 | | | | 300 | | | | | | |
| 274 | gga | ggg | gag | tgc | tca | acc | aca | cct | atc | tat | cat | caa | tca | ccc | caa | gtt | 960 |
| 275 | Gly | Gly | Glu | Cys | Ser | Thr | Thr | Pro | Ile | Tyr | His | Gln | Ser | Pro | Gln | Val | |
| 276 | 305 | | | | 310 | | | | 315 | | | | | | 320 | | |
| 278 | gcg | agg | cca | aac | gga | gtt | aga | cta | cca | aca | tgc | ccc | cct | att | ccc | ggg | 1008 |
| 279 | Ala | Arg | Pro | Asn | Gly | Val | Arg | Leu | Pro | Thr | Ser | Pro | Pro | Ile | Pro | Gly | |
| 280 | | | | 325 | | | | 330 | | | | | | 335 | | | |
| 282 | ata | ctt | aaa | ggg | cgt | gtc | aag | cat | gaa | cat | tag | | | | | | 1041 |
| 283 | Ile | Leu | Lys | Gly | Arg | Val | Lys | His | Glu | His | | | | | | | |

RAW SEQUENCE LISTING

DATE: 05/12/2005

PATENT APPLICATION: US/10/533,232

TIME: 08:24:04

Input Set : D:\1392-10-19 PCT.ST25.txt

Output Set: N:\CRF4\05122005\J533232.raw

```

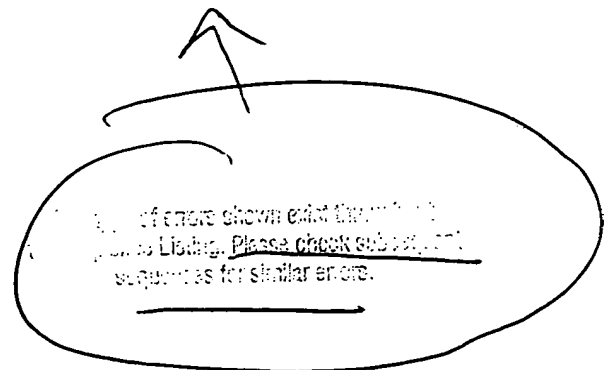
284          340          345
287 <210> SEQ ID NO: 4
288 <211> LENGTH: 346
289 <212> TYPE: PRT
290 <213> ORGANISM: Oryza sativa
292 <400> SEQUENCE: 4
294 Met Val Ser Gly Ala Ala His Ser Ala Ser Thr Ser Gly Gly Gly Gly
295 1          5          10          15
298 Gly Ser Glu Gly Ser Pro Thr Gly Arg Ala Ala Pro Gly Met Gln Gly
299          20          25          30
302 Gly Gly Ser Ala Ala Thr Pro Ala Ala Ser Ala Ser Ala Thr Pro
303          35          40          45
306 Ala Ser Glu Thr Thr Val Ala Arg Arg Leu Asp Gly Leu Asp Ile Gln
307          50          55          60
310 Gly Asp Asp Ala Pro Ser Ser Gln Pro Ala Thr Ser Lys Lys Lys Lys
311 65          70          75          80
314 Arg Gly Pro Gly Thr Arg Ala Thr Gly Pro Asp Lys Gly Gly Arg Gly
315          85          90          95
318 Leu Arg Gln Phe Ser Met Lys Val Cys Glu Lys Val Glu Ser Lys Gly
319          100         105         110
322 Arg Thr Thr Tyr Asn Glu Val Ala Asp Glu Leu Val Ala Glu Phe Ala
323          115         120         125
326 Asp Pro Asn Asn Asn Phe Ala Ser Pro Asp Pro Asp Asn Pro Asn Thr
327          130         135         140
330 Pro Gln Phe Asp Glu Lys Asn Ile Arg Arg Arg Val Tyr Asp Ala Leu
331 145          150         155         160
334 Asn Val Leu Met Ala Met Asp Ile Ile Ser Lys Asp Lys Lys Glu Ile
335          165         170         175
338 Gln Trp Lys Gly Leu Pro Arg Thr Ser Met Ser Asp Val Glu Leu
339          180         185         190
342 Lys Thr Glu Ile Ile Gly Leu Lys Gly Arg Ile Asp Lys Lys Asn Ala
343          195         200         205
346 Tyr Leu Gln Glu Leu Glu Asp Gln Phe Val Gly Leu Gln Asn Leu Ala
347          210         215         220
350 Gln Arg Asn Glu Gln Leu Tyr Gly Ser Gly Asn Ala Pro Ser Gly Gly
351 225          230         235         240
354 Val Ala Leu Pro Phe Ile Leu Val Gln Thr Arg Pro His Ala Thr Val
355          245         250         255
358 Glu Val Glu Ile Ser Glu Asp Met Gln Leu Val His Phe Asp Phe Asn
359          260         265         270
362 Ser Thr Pro Phe Glu Leu His Asp Asp Ser Phe Val Leu Lys Ala Leu
363          275         280         285
366 Gly Phe Ser Gly Lys Glu Pro Asp Asp Thr Gln Ala Trp Val Gly Asn
367          290         295         300
370 Gly Gly Glu Cys Ser Thr Thr Pro Ile Tyr His Gln Ser Pro Gln Val
371 305          310         315         320
374 Ala Arg Pro Asn Gly Val Arg Leu Pro Thr Ser Pro Pro Ile Pro Gly
375          325         330         335
378 Ile Leu Lys Gly Arg Val Lys His Glu His

```

<210> 59
<211> 726
<212> DNA
<213> Oryza sativa
<220>
<223>
<220>
<221> CDS
<222> (1)..(726)

INVALID RESPONSE
MANDATORY <220> <223>
PLEASE EXPLAIN LOCATION OF
"XAA"
SEE ITEM # 9 ERROR SUMMARY SHEET.

<400> 59
atg ggg agg ggg aag ata gtg ata agg agg ata gac aac tcg acg agc 48
Met Gly Arg Gly Lys Ile Val Ile Arg Arg Ile Asp Asn Ser Thr Ser
1 5 10 15
agg cag gtg acg ttc tcg aag cgt cgg aac ggg ctt ctg aag aag gcg 96
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
20 25 30
aag gag cta tcc atc ctc tgc gat gcg gag gtc ggc ctt gtc gtc ttc 144
Lys Glu Leu Ser Ile Leu Cys Asp Ala Glu Val Gly Leu Val Val Phe
35 40 45
tcc agc acc ggc ass ctc tat gag ttc tcc agc acc aac atg aaa act 192
Ser Ser Thr Gly Xaa Leu Tyr Glu Phe Ser Ser Thr Asn Met Lys Thr
50 55 60



RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/533,232

DATE: 05/12/2005
TIME: 08:24:05

Input Set : D:\1392-10-19 PCT.ST25.txt
Output Set: N:\CRF4\05122005\J533232.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq# 5; N Pos. 702
Seq# 5; Xaa Pos. 234
Seq# 6; Xaa Pos. 234
Seq# 59; Xaa Pos. 53
Seq# 60; Xaa Pos. 53
Seq# 79; Xaa Pos. 71
Seq# 80; Xaa Pos. 71
Seq# 111; Xaa Pos. 23,56,57,104,126
Seq# 112; Xaa Pos. 23,56,57,104,126
Seq# 121; Xaa Pos. 64
Seq# 122; Xaa Pos. 64
Seq# 137; Xaa Pos. 34
Seq# 138; Xaa Pos. 34
Seq# 151; Xaa Pos. 956,961,1086
Seq# 152; Xaa Pos. 956,961,1086
Seq# 161; Xaa Pos. 264
Seq# 162; Xaa Pos. 264
Seq# 293; Xaa Pos. 226
Seq# 294; Xaa Pos. 226
Seq# 303; Xaa Pos. 2,6
Seq# 304; Xaa Pos. 2,6

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:347

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/533,232

DATE: 05/12/2005

TIME: 08:24:05

Input Set : D:\1392-10-19 PCT.ST25.txt

Output Set: N:\CRF4\05122005\J533232.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No
 L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date
 L:454 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:672
 M:341 Repeated in SeqNo=5
 L:623 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:224
 L:5577 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:59
 L:5577 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:59 after pos.:192
 L:5653 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60 after pos.:48
 L:7834 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:79
 L:7834 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:79 after pos.:240
 L:7990 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80 after pos.:64
 L:11109 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:111
 L:11109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111 after pos.:96
 M:341 Repeated in SeqNo=111
 L:11285 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:112 after pos.:16
 M:341 Repeated in SeqNo=112
 L:12215 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:121
 L:12215 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:121 after pos.:192
 L:12307 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122 after pos.:48
 L:13746 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:137
 L:13746 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:137 after pos.:144
 L:13994 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:138 after pos.:32
 L:16632 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:151
 L:16632 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:151 after pos.:2880
 M:341 Repeated in SeqNo=151
 L:16970 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:152 after pos.:944
 M:341 Repeated in SeqNo=152
 L:17914 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:161
 L:17914 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:161 after pos.:816
 L:18026 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:162 after pos.:256
 L:31473 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:293
 L:31473 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:293 after pos.:720
 L:31553 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:294 after pos.:224
 L:32309 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ ID#:303
 L:32309 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:303 after pos.:48
 L:32606 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:304 after pos.:0